

semipermeable membrane has a substantially uniform structure. Claims 1 and 5 each recite, in part, that the semipermeable membrane has a homogeneous structure such that the membrane has a substantially uniform structure. Claim 16 recites, in part, that the polysulfone semipermeable membrane has a substantially uniform structure throughout a thickness dimension of the membrane.

Applicants have surprisingly discovered polysulfone semipermeable membranes that have a uniform structure useful for liquid separations, such as, microfiltration, ultrafiltration, reverse osmosis, dialysis and the like. See, Specification, page 6, lines 11-15. The semipermeable membranes of the present invention are made from uniquely discovered melt-spun technology as disclosed in the Specification. See, Specification, page 1, lines 5-7. Applicants have provided a number of illustrative examples that demonstrate, for example, the desirable permeability characteristics of the uniformly structured polysulfone membranes of the present invention. See, Specification, pages 17-25.

Applicants respectfully submit that *Pemawansa* fails to disclose and/or arguably suggest a number of features of the claimed invention. Of course, “anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration.” *W.L. Gore and Associates v. Garlock, Inc.*, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983).

For example, *Pemawansa* fails to disclose or arguably suggest a polysulfone semipermeable membrane that has a uniform structure as required by the claimed invention. *Pemawansa* merely relates to formulating specific polymeric compounds useful in membrane technology and not polysulfone semipermeable membranes that are produced by melt-spun processing such that it has a uniform structure. See, *Pemawansa*, Abstract. More specifically, the clear emphasis of *Pemawansa* relates to modifying the molecular weight distribution of condensation polymers through fractional precipitation to produce the desired polymeric compounds and not providing a uniformly

structured polysulfone semipermeable membrane, such as throughout the thickness dimension of the membrane as required by Claim 16, to enhance the permeability characteristics of the membrane. See, *Pemawansa*, column 5, line 19-22. Moreover, *Pemawansa* merely mentions that its polymeric compounds can be processed into membranes by a conventional manner. See, *Pemawansa*, column 8, lines 39-42.

Indeed, Applicants have recognized that conventional processing of polysulfone hollow fiber membranes, such as solution-spinning, can produce asymmetric polysulfone membranes (i.e., non-homogenous membrane porosity progressing through the thickness dimension of the membrane). See, Specification, page 3, lines 8-15. As previously discussed, Applicants have provided a number of illustrative examples which demonstrate desirable permeability characteristics of polysulfone semipermeable membranes that have a substantially uniform structure as required by the claimed invention. The membranes of the present invention are produced by Applicants' uniquely discovered melt-spun technology which requires a number of different processing conditions, such as, formulating, melting, extruding and quenching, as illustrated in Figs. 1 and 2 of the Specification. Again, *Pemawansa* merely mentions that its polymeric compounds can be processed in a conventional way to produce liquid separation membranes.

Therefore, Applicants respectfully submit that *Pemawansa* fails to teach or arguably suggest the polysulfone semipermeable membrane features of the claimed invention. Accordingly, Applicants respectfully request that the rejection of Claims 1-8, 10-14 and 16-18 under 35 U.S.C. § 102 be withdrawn.

In the Office Action, Claims 9 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Pemawansa*. The Patent Office essentially asserts that *Pemawansa* discloses or suggests each and every feature of Claims 9 and 15.

Applicants respectfully submit that this rejection is improper. Claims 9 and 15 each depend from independent Claim 5 and therefore, as a matter of law, incorporate the features of independent Claim 5.

As previously discussed, Applicants respectfully submit that *Pemawansa* fails to teach or suggest a number of features of the claimed invention. For example, *Pemawansa* fails to teach or suggest a polysulfone semipermeable membrane that has a homogeneous structure such that the membrane has a substantially uniform structure as required by Claim 5.

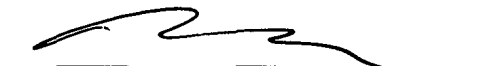
In contrast, the clear emphasis of *Pemawansa* relates to formulating polymeric compounds by modifying the molecular weight distribution of condensation polymers and not providing a membrane with a substantially uniform structure as previously discussed. Indeed, Applicants have demonstrated that the polysulfone semipermeable membranes of the present invention have desirable permeability characteristics useful for liquid separations due to their substantially uniform characteristics resulting from Applicants' uniquely discovered melt-spun process.

Based on the apparent differences between *Pemawansa* and the claimed invention, Applicants respectfully submit that *Pemawansa* fails to teach or suggest a number of features of the claimed invention, such as the substantially uniform structure feature as required by Claim 5. Therefore, Applicants respectfully submit that *Pemawansa* fails to render obvious Claims 9 and 15.

Accordingly, Applicants respectfully request that the obviousness rejection of Claims 9 and 15 be withdrawn.

For the foregoing reasons, Applicants respectfully request reconsideration of their patent application and earnestly solicit an early allowance of same.

Respectfully submitted,



Robert M. Barrett (Reg. No. 30,142)

BELL, BOYD & LLOYD LLC

P.O. Box 1135

Chicago, Illinois 60690-1135

(312) 807-4204

ATTORNEY FOR APPLICANTS

397652